

IN THE SPECIFICATION:

Please amend paragraphs [002], [005], [008], [009], [029], [037], [040], [042], [052] and add paragraph [064] as shown below, in which deleted terms are shown with strikethrough and/or double brackets, added terms are shown with underscoring.

Paragraph [002]

A generally known dry multiple-disk clutch includes driving friction disks provided on their outside circumferences with external teeth, driven friction disks provided on their inside circumferences with internal teeth, an outer clutch member having the shape of a bottomed cylinder and provided with slots in its side wall, an inner clutch member provided with splines, and a pressure mechanism. The driving friction disks and the driven friction disks are arranged alternately with the external teeth of the driving friction disks engaged in the slots of the outer clutch member and the internal teeth of the driven clutch disks engaged with the splines of the inner clutch member. The driving clutch disks are axially movable relative to the outer clutch member, and the driven friction disks are axially movable relative to the inner clutch member. The pressure mechanism applies pressure to the superposed driving and driven clutch disks to transmit power from the outer clutch member to the inner clutch member by the agency of friction between the driving and the driven clutch disks. When the pressure applied to the driving and the driven clutch disks by the pressure mechanism is removed, the driving and the driven clutch disks are spaced apart to stop power transmission. Such a dry multiple-disk clutch is disclosed Fig. 1 of JP 2-570 B.

Paragraph [005]

To achieve the object, the present invention provides a dry multiple-disk clutch for transmitting power from a drive shaft to a transmission input shaft, including an outer clutch member interlocked with the drive shaft so as to be driven for rotation by the drive shaft; a plurality of driving friction disks interlocked with the outer clutch member; a plurality of driven friction disks alternated with the driving friction disks and interlocked with the transmission input shaft; ~~and~~ a pressure member disposed opposite to the outer clutch member with the driving and the driven friction disks arranged alternately between the outer clutch member and the pressure member, for moving in opposite axial directions to compress the driving and the driven friction disks together and to disengage the driven friction disks from the driving friction disks; ~~the dry multiple-disk clutch comprising~~ and strap plates disposed between a peripheral part of the outer clutch member and ~~[[a]] peripheral parts~~ of the driving friction disks, and connecting the respective peripheral parts of the outer clutch member and the driving friction disks.

Paragraph [008]

Preferably, each of the driving friction disks is provided with a plurality of external projections, the outer clutch member is provided with a plurality of external projections, studs are attached to the external projections of the outer clutch member, respectively, and each of the strap plates has one end attached to the external projection of a corresponding one ~~[[each]]~~ of the driving friction disks and the other end fitted on a corresponding one of the studs.

Paragraph [009]

Preferably, the strap plates are substantially tangent to the circumferences of the driving friction disks.

Paragraph [029]

DESCRIPTION OF THE ~~PREFERRED~~ PRESENT EMBODIMENTS

Fig. 1 is a longitudinal sectional view of a dry multiple-disk clutch 1 in a first embodiment of the present invention intended to be applied to a motorcycle, and parts associated with the dry multiple-disk clutch 1. The dry multiple-disk clutch 1 is mounted on one end of a transmission input shaft 4 included in a transmission. The transmission input shaft 4 is extended parallel to the crankshaft of an engine, not shown, i.e., a drive shaft, and supported for rotation in a ball bearing 3 on a crankcase 2. A driven gear 7 is supported for rotation by a needle bearing 6 on the transmission input shaft 4 and engaged with a drive gear 5. A side cover 8 is disposed near the driven gear 7.

Paragraph [037]

Fig. 12 is a sectional view taken on the line XII-XII in Fig. 2. Fig. 12 shows the engaged dry multiple-disk clutch 1. The driven friction disk 15, the driving friction disk 13, the driven friction disk 15, the driving friction disk 13, the driven friction disk 15 and the pressure member 14 are arranged in that order from the side of the outer clutch member 10 outward. The external projection 13a of another driving friction disk 13, namely, the driving friction disk 13 not shown in Fig. 11, and the strap plate 26 fastened to the external projection 13a with the rivets 27 are seen in Fig. 12[[1]]. An externally threaded inner part of the second collar stud 12 extending

inward from a collar 12a formed on the second collar stud 12 is screwed in the threaded hole 10d of the external projection 10b of the outer clutch member 10. The externally threaded part of the second collar stud 12 screwed in the threaded hole 10d has a length longer than that of the externally threaded inner part of the first collar stud 11 screwed in the threaded hole 10. The strap plate 26 fastened to the driving friction disk 13, and the outer clutch plate 33 are mounted in that order on an outer part of the second collar stud 12 extending outward from the collar 12a, and are fastened to the outer part of the second collar stud 12 with a nut 34 screwed on an externally threaded outer end of the outer part of the second collar stud 12. Any collar is not put on the second collar stud 12. The second collar stud 12 is passed through the hole 26a of the strap plate 26. When the outer clutch member 10 turns, i.e., when the outer clutch member 10 moves to the left as viewed in Figs. 11 and 12, the driving friction disks 13 and the pressure member 14 are pulled by the strap plates 26 and rotate together with the outer clutch member 10.

Paragraph [040]

The annular release plate 21 is held in place on the pressure member 14 with the snap ring 20. ~~[[the]]~~ The release pin 23 is fitted in the inner ring of the ball bearing 22 fitted in the central hole of the release plate 21. The outer end of the release rod 24 extended through the transmission input shaft 4 is in contact with the inner end of the release pin 23. The release rod 24 is pushed axially outward by hydraulic or mechanical force to disengage the dry multiple-disk clutch 1. Then, the release plate 21 is moved outward through the release pin 23, and the ball bearing 22 in contact with the flange 23a of the release pin 23 to push the pressure member 14 outward, i.e., in a direction away from the outer clutch member 10, against the resilience of the

coned disk spring 19 through the snap ring 20 by the release plate 21. Consequently, the contact surfaces of the outer clutch member 10, the vibration control plate 36, the driving friction disks 13, the driven friction disks 15 and the pressure member 14 are separated to disengage the dry multiple-disk clutch 1. Thus, power transmission from the outer clutch member 10 to the transmission input shaft 4, namely, power transmission from the crankshaft of the engine to the transmission, is cut off.

Paragraph [042]

Thus, the two driving friction disks 13 and the single pressure member 14 of the dry multiple-disk clutch 1 in the first embodiment are connected to the outer clutch member 10 by the strap plates 26. Therefore, the rotating outer clutch member 10 drags the driving friction disks 13 and the pressure member 14 through the strap plates 26 and, consequently, the driving friction disks 13 and the pressure member 14 rotate together with the outer clutch member 10. Since there are not any gaps corresponding to the gaps between the external teeth of the driving friction disks and edges of the parts of the side wall of the outer clutch member defining the slots in the conventional dry multiple-disk clutch, the dry multiple-disk clutch 1 in the first embodiment does not generate any hitting sounds. Thus, the dry multiple-disk clutch 1 in the first embodiment operates silently.

Paragraph [052]

As apparent from the foregoing description, the dry multiple-disk clutch 40 in the second embodiment, similar to the dry multiple-disk clutch 1 in the first embodiment, prevents the

generation of hitting sounds that is caused by the collision of the external teeth of the driving friction disks against the edges of parts of the side wall of the outer clutch member defining the slots in the conventional dry multiple-disk clutch by the agency of the plate springs 55. Since the dry multiple-disk clutch 40 in the second embodiment does not need an inevitably large outer clutch member having the shape of a bottomed cylinder, the dry multiple-disk clutch 40 can be formed in compact construction. Since the dry multiple-disk clutch 40 does not need any member corresponding to the inner clutch member of the conventional dry multiple-disk clutch, the dry multiple-disk clutch 40 in the second embodiment needs fewer parts. The driven friction disk 47 with a vibration control function effectively prevents the generation of vibrations by the friction surfaces of the friction disks. Since the pressure member 43 has a releasing function, the dry multiple-disk clutch 40 in the second embodiment does not need any member corresponding to the release plate 21 of the first embodiment, and needs fewer parts than the dry multiple-disk clutch 1 in the first embodiment. Since the coned disk spring 51 retained in place by the outer clutch plate 50 connected to the outer clutch member 41 presses the pressure member 43, the dry multiple-disk clutch 40 in the second embodiment does not need any member corresponding to the first disk spring holder 16, the ball bearing 17 and the second disk spring holder 18 of the dry multiple-disk clutch 1 in the first embodiment. Thus, the dry multiple-disk clutch 40 in the second embodiment requires a reduced number of parts and can be formed in compact, lightweight construction.

Paragraph [053]

Although the present embodiments of the invention have been described in detail, persons

skilled in the art will understand that variations and modifications may be made thereto within the spirit and essence of the invention. The scope of the invention is indicated by the appended claims.